(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization International Bureau



(43) International Publication Date 30 September 2004 (30.09.2004)

PCT

(10) International Publication Number WO 2004/083592 A3

(51) International Patent Classification7:

E21B 17/00,

(21) International Application Number:

PCT/US2004/008073

(22) International Filing Date: 18 March 2004 (18.03.2004)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data: 60/455,718

18 March 2003 (18.03.2003) US

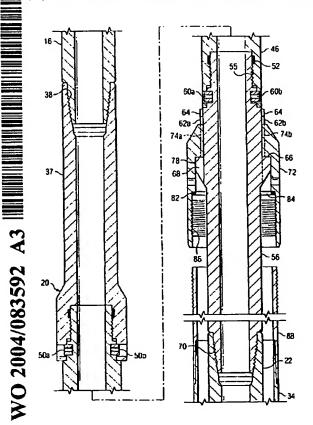
- (71) Applicant (for all designated States except US): EVEN-TURE GLOBAL TECHNOLOGY [US/US]; 16200 A Park Row, Houston, TX 77084 (US).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): BRISCO, David, Paul [US/US]; 405 Westridge Drive, Duncan, OK 73533 (US). BULLOCK, Michael, Dennis [US/GB]; The Beeches, 25 Hillhead Road, Aberdeen, AB15 9EJ (GB).

WADDELL, Kevin, Karl [US/US]; 11007 Sprucedale Court, Houston, TX 77077 (US).

- (74) Agents: KICE, Warren, B. et al.; Haynes and Boone, LLP, Suite 3100, 901 Main Street, Dallas, TX 75202 (US).
- (81) Designated States (unless otherwise indicated. for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR,

[Continued on next page]

(54) Title: APPARATUS AND METHOD FOR RUNNING A RADIALLY EXPANDABLE TUBULAR MEMBER



(57) Abstract: A tubular apparatus (20) and method, according to which a first tubular member (34) is adapted to be lowered into a well bore and a second tubular member (120) is connected to the first tubular member (34). A third tubular member (102, 112) is normally connected to the first tubular member (34) and disconnected from the second tubular member (102, 112), and is adapted for movement relative to the first (34) and second tubular (120, 112) members to disconnect from the first tubular member (34) and connect to the second tubular member (102, 112).

BEST AVAILABLE COPY

GB, GR, 1TU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Declarations under Rule 4.17:

- as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii)) for the following designations AE. AG. AL. AM. AT. AU. AZ. BA. BB. BG. BR. BW. BY. BZ. CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS. JP, KE, KG, KP, KR, KZ, LC, LK. LR, LS, LT, LU. LV, MA. MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ. TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW. ARIPO patent (BW. GH. GM. KE, LS. MW. MZ, SD. SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD. RU. TJ. TM), European patent (AT. BE. BG. CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT. LU, MC, NL, PL, PT, RO. SE, SI, SK, TR), OAP! patent (BF. BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD. TG)
- as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii)) for the following designations AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ,

EC. EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID. II., IN, IS. JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW, ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NI, PI, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG)

- of inventorship (Rule 4.17(iv)) for US only
- of inventorship (Rule 4.17(iv)) for US only

Published:

- with international search report
- (88) Date of publication of the international search report: 19 May 2005

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

INTERNATIONAL SEARCH REPORT

International application No.

PCT/U504/08073

A. CLASSIBLATION OF SUBJICT MATTER PECT) E218 17/30, 19/16 US CL				
US CL. **T66742.7.380,208 B. FELLDS SEARCHED Minimum documentation searched (elassification system followed by classification symbols) U.S.: 166742.7.380,277.377.378,361,382,77.51,301,206,242.1,242,6,207,208 Discumentation searched other than minimum documentation to the extent that such documents are included in the fields searched followed the data base consulted during the international search (name of data base and, where practicable, search terms used) Flower Sea Currimunion Sheet C. DOCUMENTS CONSIDERED TO BE RELEVANT Cricegory ** Citation of destinant, with Indication, where appropriate, of the relevant passages. Relevant to claim No. X.P.L. US 2003/0075337 A1 (Magaire) 24 April 2003 (24.04,2005), see Figures. 71-26,28-34 X.P.L. US 2003/0075337 A1 (Magaire) 24 April 2003 (24.04,2005), see Figures. 71-26,28-34 X.P.L. US 2002/0139540 A1 (Laurizem) 03 OCtober 2002 (03,10,2007), see paragraph 0038. 27 A. US 4,915,177 A (Claycomb) 10 April 1990 (10,04,1990), see Figures. 1-20 A. US 4,995,464 A (Walking et al.) 26 February 1991 (26.02,1991), see Figures. 1-20 A. US 4,718,088 A (Gonzalez et al.) 18 October 1993 (22,10,1996), see Figures. 1-20 A. US 4,778,088 A (Gonzalez et al.) 18 October 1993 (11,102,2003), see Figures. 1-20 Further documentation of passage published on a rabel to the conditionation of Box C. Specific estaphiles of clied documents: **Common witch may have been deaded on printy published on a rabel to the conditionation of Box C. **Common witch may have been deaded on printy published on a rabel to the conditionation of the conditionation of box C. **Common witch may have been deaded on a rabel to the conditionation of the				
ELLDS SKARCHED Ninitum documentation searched (classification system fallowed by classification symbols) U.S.: 166742.7,380,377,378,381,382,77.51,301,206,242.1,242.6,207,208 Discussionality of the searched other than minimum documentations to the extent that such documents are included in the fields searched the state of the base consulted during the international search (mase of data base and, where practicable, search terms used) Flesse Sen Currinausion Sheet C. DOCUMENTS CONSIDERED TO BE RELEVANT Citispeny ** US 2003/0075337 A1 (Magnire) 24 April 2003 (24.04.2003), see Figures. 71-26,28-34 Y, P, L US 2002/0139540 A1 (Lurrizem) 03 October 2002 (03.10.2002), see paragraph 0038. 27 A US 4,915,177 A (Claycomb) 10 April 1990 (10,04.1990), see Figures. 1-20 A US 3,667,547 A (Ahistono) 06 June 1972 (06.06.1972), see Figures. 1-20 A US 4,778,088 A (Gonzalez et al.) 26 February 1991 (26.02.1991), see Figures. 1-20 A US 4,778,088 A (Gonzalez et al.) 18 October 1993 (22.10.1996), see Figures. 1-20 A US 4,778,088 A (Gonzalez et al.) 18 October 1998 (18,10.1988), see Figures. 1-20 Furthur documents are Usted in the continuation of Box C. See patent family attack. See patent family atta				
Historium documentation searched (classification system (allowed by classification symbols) U.S.: 166/242.7,380,377.371,378,381,382,77.51,301,206,242.1,242.6,207,208 Discurrentation searched other than minimum documentation to the extent that such documents are included in the fields searched line of the base consulted during the international search (name of data base and, where practicable, search terms used) Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) Flexes Sea Currinaution Sheet C. DOCUMENTS CONSIDERED TO BR RELEVANT Chaptery ** Citation of document, with Indication, where appropriate, of the relevant passages X.P.L. US 2003/0075337 A1 (Magairo) 24 April 2003 (24.04.2005), see Figures. 71-26,28-34 Y.P.L. Y US 2002/0139540 A1 (Laurizem) 03 October 2002 (03,10.2002), see paragraph 0038. 27 A US 4,915,177 A (Cisycomb) 10 April 1990 (10,04.1990), see Figures. 1-20 A US 4,955,464 A (Walkins et al.) 26 February 1991 (26.02,1991), see Figures. 1-20 A US 4,955,464 A (Malkins et al.) 22 October 1993 (22.10.1996), see Figures. 1-20 A US 4,778,088 A (Gonzalez et al.) 18 October 1993 (22.10.1996), see Figures. 1-20 A US 4,778,088 A (Gonzalez et al.) 11 February 2003 (11.02.2003), see Figures. 1-20 First ther documents are listed in the continuation of Box C. See patent family annex. 1-20 First the application of patent published on or abet; its international filing that or included a patent published of the annexity of the secures in the continuation is a contested to be of patent published on the continuation of the contested of the secure of the contested in the continuation of the contested of the contested in t				
Miniprotum documentation searched (classification system followed by classification symbols) U.S.: 1667242.7.380.377.377.378,391.382,77.51,301.206,292.1.292.6,207,208 Discumentation searched other than minimum documentation to the extent that such documents are included in the fields searched for the first of that base consulted during the international search (name of data base and, where precipitable, search terms used) Flexey Sen Custinusation Sheet C. DOCUMENTS CONSIDERED TO BE RELEVANT Cittageny * Cittain of document, with Indication, where appropriate, of the relevant passages Relevant to claim No. X.P.I. US 2003/0075337 A1 (Magnire) 24 April 2003 (24.04,2003), see Figures. 7. P.P.I. US 2003/0075337 A1 (Magnire) 24 April 2003 (24.04,2003), see Figures. 27 A US 4.915,177 A (Claycomb) 10 April 1990 (10,04,1990), see Figures. 1-20 A US 4.955,464 A (Walkists et al.) 26 February 1991 (26.02,1991), see Figures. 1-20 A US 3.667,547 A (Ahistono) 06 June 1972 (06.06,1972), see Figures. 1-20 A US 4.778,088 A (Gonzalez et al.) 18 Cotober 1993 (22.10,1996), see Figures. 1-20 A US 4.778,088 A (Gonzalez et al.) 18 Cotober 1993 (22.10,1996), see Figures. 1-20 A T US 6.516,887 B2 (Nguyen et al.) 11 February 2003 (11.02,2003), see Figures. 1-20 Further documents are listed in the continuation of Box C. See patent family annex. See patent family annex. 1-20 See patent fam				
U.S.: 166/242.7,380,277,377.378,381,382,77.51,301,206,242.1,242.6,207,208 Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched lines. Search terms used) Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) Flexey Sen Currimatulon Sheet C. DOCUMENTS CONSIDERED TO BE RELEVANT Citation of document, with indication, where appropriate, of the relevant passages. Relevant to claim No. X.P.L. US 2003/0075337 AI (Maguire) 24 April 2003 (24,04,2003), see Figures. 7, P.L. Y. US 2002/0139540 AI (Lauritzen) 03 October 2002 (03,10,2002), see paragraph 0038. 27 A. US 4,915,177 A (Claycomb) 10 April 1990 (10,04,1990), see Figures. 1-20 A. US 4,995,464 A (Walkins et al.) 26 February 1991 (26,02,1991), see Figures. 1-20 A. US 3,667,347 A (Ablatone) 06 June 1972 (06,06,1972), see Figures. 1-20 A. US 4,778,088 A (Gonzadez et al.) 18 October 1993 (22,10,1996), see Figures. 1-20 A. T. US 6,516,887 B2 (Nguyen et al.) 11 February 2003 (11,02,20/3), see Figures. 1-20 Further documents are listed in the continuation of Box C. Special exteguries of cited documents: A document defaling the general state of the on which is not considered to be for principal relevance to the second second to the continuation of Box C. Further documents which may throw deather on printy clain(s) or which is fellow to considered to be seen leven to the principal relevance to the claimed second to the document is the continuation of the international filing tax or printing the continuation of the international filing tax or printing the continuation for the continuation of the international search to continuate on the continuation of the continuation of the continuation				
U.S.: 166/242.7,380,277,377.378,381,382,77.51,301,206,242.1,242.6,207,208 Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched lines. Search terms used) Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) Flexey Sen Currimatulon Sheet C. DOCUMENTS CONSIDERED TO BE RELEVANT Citation of document, with indication, where appropriate, of the relevant passages. Relevant to claim No. X.P.L. US 2003/0075337 AI (Maguire) 24 April 2003 (24,04,2003), see Figures. 7, P.L. Y. US 2002/0139540 AI (Lauritzen) 03 October 2002 (03,10,2002), see paragraph 0038. 27 A. US 4,915,177 A (Claycomb) 10 April 1990 (10,04,1990), see Figures. 1-20 A. US 4,995,464 A (Walkins et al.) 26 February 1991 (26,02,1991), see Figures. 1-20 A. US 3,667,347 A (Ablatone) 06 June 1972 (06,06,1972), see Figures. 1-20 A. US 4,778,088 A (Gonzadez et al.) 18 October 1993 (22,10,1996), see Figures. 1-20 A. T. US 6,516,887 B2 (Nguyen et al.) 11 February 2003 (11,02,20/3), see Figures. 1-20 Further documents are listed in the continuation of Box C. Special exteguries of cited documents: A document defaling the general state of the on which is not considered to be for principal relevance to the second second to the continuation of Box C. Further documents which may throw deather on printy clain(s) or which is fellow to considered to be seen leven to the principal relevance to the claimed second to the document is the continuation of the international filing tax or printing the continuation of the international filing tax or printing the continuation for the continuation of the international search to continuate on the continuation of the continuation of the continuation				
Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) Electronic data base consulted during the international search (name of data base and, where practicable in the consultation of Cat. 1940, 2003, see Figures. 1-20 LIS 4.915,177 A (Claycomb) 10 April 1990 (10,04.1990), see Figures. 1-20 LIS 4.995,464 A (Walkins et al.) 22 October 1993 (22.10.1996), see Figures. 1-20 LIS 4.778,088 A (Gonzalez et al.) 18 October 1998 (18,10.1988), see Figures. 1-20 LIS 4.778,088 A (Gonzalez et al.) 18 October 1998 (18,10.1988), see Figures. 1-20 Further documents are listed in the consistence of particular decoment in the analysis of the security data of the consistence of particular decoment in the consistence				
Electronic data base consulted during the interestional search (mane of data base and, where practicable, search terms used) Flexey Sen Certification Steet C. DOCUMENTS CONSIDERED TO BE RELEVANT Citiulon of doctaremt, with Indication, where appropriate, of the relevant passages Relevant to cluim No. X.P.L. Y.P.L. Y. US 2003/0075337 A1 (Maguiro) 24 April 2003 (24. D4. 2003), see Figures. 27 Y.P.L. Y. US 2002/0139540 A1 (Laurictem) 03 OCtaber 2002 (03. 10. 2002), see paragraph 0038. 27 A. US 4,919,177 A (Claycomb) 10 April 1990 (10.04.1990), see Figures. 1-20 A. US 3,667,547 A (Ahlatomo) 06 June 1972 (06. 06.1972), see Figures. 1-20 A. US 4,778,088 A (Gonzalez et al.) 22 October 1993 (22. 10. 1996), see Figures. 1-20 A. T. US 6,516,887 B2 (Nguyen et al.) 11 February 2003 (11.02. 2003), see Figures. 1-20 Electronic datalog its general state of the on which is one considered to be of projective relevance. See patent family annex. Liter document published street his international filing face or priority data and not in sensities with the specifical to severate and severate in second good of sement second good of sements of particular devance in the second good of sements of second good of sements of the content of particular devance in the second good of sements of the second content of the second of the second good of sements of the second good of sements of the second of the second good of sements of the second good of sements of the second content of the second good of sements of the second content of the second good of sements of the second good of				
Electronic data base consulted during the interestional search (mane of data base and, where practicable, search terms used) Flexey Sen Certification Steet C. DOCUMENTS CONSIDERED TO BE RELEVANT Citiulon of doctaremt, with Indication, where appropriate, of the relevant passages Relevant to cluim No. X.P.L. Y.P.L. Y. US 2003/0075337 A1 (Maguiro) 24 April 2003 (24. D4. 2003), see Figures. 27 Y.P.L. Y. US 2002/0139540 A1 (Laurictem) 03 OCtaber 2002 (03. 10. 2002), see paragraph 0038. 27 A. US 4,919,177 A (Claycomb) 10 April 1990 (10.04.1990), see Figures. 1-20 A. US 3,667,547 A (Ahlatomo) 06 June 1972 (06. 06.1972), see Figures. 1-20 A. US 4,778,088 A (Gonzalez et al.) 22 October 1993 (22. 10. 1996), see Figures. 1-20 A. T. US 6,516,887 B2 (Nguyen et al.) 11 February 2003 (11.02. 2003), see Figures. 1-20 Electronic datalog its general state of the on which is one considered to be of projective relevance. See patent family annex. Liter document published street his international filing face or priority data and not in sensities with the specifical to severate and severate in second good of sement second good of sements of particular devance in the second good of sements of second good of sements of the content of particular devance in the second good of sements of the second content of the second of the second good of sements of the second good of sements of the second of the second good of sements of the second good of sements of the second content of the second good of sements of the second content of the second good of sements of the second good of				
C. DOCUMENTS CONSIDERED TO BE RELEVANT Citepory				
C. DOCUMENTS CONSIDERED TO BE RELEVANT Citepory				
C. DOCUMENTS CONSIDERED TO BE RELEVANT Citepory				
C. DOCUMENTS CONSIDERED TO BE RELEVANT Citepory				
C. DOCUMENTS CONSIDERED TO BE RELEVANT Cutegory Citation of document, with indication, where appropriate, of the relevant passages Relevant to claim No. X.P.L. US 2003/0075337 A1 (Maguire) 24 April 2003 (24.04.2003), see Figures. 27 Y. US 2002/0139540 A1 (Lauricem) 03 October 2002 (03.10.2002), see paragraph 0038. A US 4.915,177 A (Claycomb) 10 April 1990 (10.04.1990), see Figures. A US 4.95,464 A (Walkins et al.) 26 February 1991 (26.02.1991), see Figures. A US 3.667.547 A (Ablatone) 06 June 1972 (06.06.1972), see Figures. A US 5.566.772 A (Coone et al.) 22 October 1993 (22.10.1996), see Figures. A US 4.778,088 A (Gonzalez et al.) 18 October 1988 (18.10.1988), see Figures. A US 6.516,887 B2 (Nguyen et al.) 11 February 2003 (11.02.2003), see Figures. Further document defaults the general state of the on which is not considered to be of posterier relevant to the one patent subtitue of posterier relevant to be one specified to see the of posterier relevant to be one specified to see the one of see the one of season to be considered to be of posterier relevant to be often in the parallel state of the cause of season to be considered to be one of season to be considered to be considered to be one of season to be considered to be one of season to be considered to be considered t				
Citapory Citabon of document, with Indication, where appropriate, of the relevant passages Relevant to claim No. X.P.L. US 2003/0075337 A1 (Maguire) 24 April 2003 (24.04.2003), see Figures. Y.P.L. 27 Y. US 2002/0139540 A1 (Lauriczen) 03 OCtober 2002 (03.10.2002), see paragraph 0038. 27 A US 4,915,177 A (Claycomb) 10 April 1990 (10.04.1990), see Figures. A US 4,995,464 A (Walkins et al.) 26 February 1991 (26.02.1991), see Figures. A US 3,667,547 A (Ablatomo) 06 June 1972 (06.06.1972), see Figures. A US 5,566,754 A (Conne et al.) 22 October 1993 (22.10.1996), see Figures. A US 4,778,088 A (Gonzalez et al.) 18 October 1988 (18,10.1988), see Figures. A.T. US 6,516,887 B2 (Nguyen et al.) 11 February 2003 (11.02.2013), see Figures.				
Citapory Citabon of document, with Indication, where appropriate, of the relevant passages Relevant to claim No. X.P.L. US 2003/0075337 A1 (Maguire) 24 April 2003 (24.04.2003), see Figures. Y.P.L. 27 Y. US 2002/0139540 A1 (Lauriczen) 03 OCtober 2002 (03.10.2002), see paragraph 0038. 27 A US 4,915,177 A (Claycomb) 10 April 1990 (10.04.1990), see Figures. A US 4,995,464 A (Walkins et al.) 26 February 1991 (26.02.1991), see Figures. A US 3,667,547 A (Ablatomo) 06 June 1972 (06.06.1972), see Figures. A US 5,566,754 A (Conne et al.) 22 October 1993 (22.10.1996), see Figures. A US 4,778,088 A (Gonzalez et al.) 18 October 1988 (18,10.1988), see Figures. A.T. US 6,516,887 B2 (Nguyen et al.) 11 February 2003 (11.02.2013), see Figures.				
Citapory Citabon of document, with Indication, where appropriate, of the relevant passages Relevant to claim No. X.P.L. US 2003/0075337 A1 (Maguire) 24 April 2003 (24.04.2003), see Figures. Y.P.L. 27 Y. US 2002/0139540 A1 (Lauriczen) 03 OCtober 2002 (03.10.2002), see paragraph 0038. 27 A US 4,915,177 A (Claycomb) 10 April 1990 (10.04.1990), see Figures. A US 4,995,464 A (Walkins et al.) 26 February 1991 (26.02.1991), see Figures. A US 3,667,547 A (Ablatomo) 06 June 1972 (06.06.1972), see Figures. A US 5,566,754 A (Conne et al.) 22 October 1993 (22.10.1996), see Figures. A US 4,778,088 A (Gonzalez et al.) 18 October 1988 (18,10.1988), see Figures. A.T. US 6,516,887 B2 (Nguyen et al.) 11 February 2003 (11.02.2013), see Figures.				
X.P.L US 2003/0075337 A1 (Maguire) 24 April 2003 (24.04.2003), see Figures. Y.P.L V. US 2002/0139540 A1 (Lauriczen) 03 OCtober 2002 (03.10.2002), see paragraph 0038. 27 A US 4.915,177 A (Claycomb) 10 April 1990 (10.04.1990), see Figures. A US 4.955,464 A (Walkins et al.) 26 February 1991 (26.02.1991), see Figures. A US 3.667,547 A (Ahistone) 06 June 1972 (06.06.1972), see Figures. A US 4.778,088 A (Conne et al.) 22 October 1993 (22.10.1996), see Figures. A US 4.778,088 A (Gonzalez et al.) 18 October 1993 (11.02.2003), see Figures. A. T US 6.516.887 B2 (Nguyen et al.) 11 February 2003 (11.02.2003), see Figures.				
Y.P.L. Y. US 2002/0139540 A1 (Lauritzem) 03 OCtober 2002 (03.10.2002), see paragraph 0038. A. US 4,915,177 A (Claycomb) 10 April 1990 (10.04.1990), see Figures. A. US 4,995,464 A (Walkins et al.) 26 February 1991 (26.02.1991), see Figures. A. US 3,667,547 A (Ablatomo) 06 June 1972 (06.06.1972), see Figures. A. US 5,566.777 A (Conne et al.) 22 October 1993 (22.10.1996), see Figures. A. US 4,778,088 A (Gonzalez et al.) 18 October 1988 (18.10.1988), see Figures. A. T. US 6,516.887 B2 (Nguyen v. al.) 11 February 2003 (11.02.2003), see Figures. 1-20 E. Special exegurées of cited documents: A. T. US 6,516.887 B2 (Nguyen v. al.) 11 February 2003 (11.02.2003), see Figures. 1-20 E. Special exegurées of cited documents: A. T. US 6,516.887 B2 (Nguyen v. al.) 11 February 2003 (11.02.2003), see Figures. 1-20 E. Special exegurées of cited documents: A. T. US 6,516.887 B2 (Nguyen v. al.) 11 February 2003 (11.02.2003), see Figures. 1-20 E. Special exegurées of cited documents: A. T. US 6,516.887 B2 (Nguyen v. al.) 11 February 2003 (11.02.2003), see Figures. 1-20 E. Special exegurées of cited documents: A. T. US 6,516.887 B2 (Nguyen v. al.) 11 February 2003 (11.02.2003), see Figures. 1-20 E. Special exegurées of cited documents: A. T. US 6,516.887 B2 (Nguyen v. al.) 11 February 2003 (11.02.2003), see Figures. 1-20 E. Special exegurées of cited documents: A. T. US 6,516.887 B2 (Nguyen v. al.) 11 February 2003 (11.02.2003), see Figures. 1-20 E. Special exegurées of cited documents: A. T. US 6,516.887 B2 (Nguyen v. al.) 11 February 2003 (11.02.2003), see Figures. 1-20 E. Special exegurées of cited documents: A. T. US 6,516.887 B2 (Nguyen v. al.) 11 February 2003 (11.02.2003), see Figures. 1-20 E. Special exegurées of cited documents: A. T. US 6,516.887 B2 (Nguyen v. al.) 11 February 2003 (11.02.2003), see Figures. 1-20 E. Special exegurées of cited documents: A. T. US 6,516.887 B2 (Nguyen v. al.) 12 February 2003 (11.02.2003), see Figures. 1-20 E. Special exegurées of cited documents: 4.				
US 2002/0139540 A1 (Lauritzen) 03 OCtober 2002 (03,10.2002), see paragraph 0038. 27 A US 4,915,177 A (Claycomb) 10 April 1990 (10,04.1990), see Figures. 1-20 A US 4,995,464 A (Walkins et al.) 26 February 1991 (26.02,1991), see Figures. 1-20 A US 3,667,547 A (Ablatono) 06 June 1972 (06.06,1972), see Figures. 1-20 A US 4,778,088 A (Conne et al.) 22 October 1993 (22,10.1996), see Figures. 1-20 A US 4,778,088 A (Gonzalez et al.) 18 October 1988 (18,10,1988), see Figures. 1-20 A. T US 6,516,887 B2 (Nguyen v. al.) 11 February 2003 (11.02,2003), see Figures. 1-20 E Special exemples of cited documents; A document defaling the general state of the on which is one considered to see of porticular reference. **Fireture document published and or after the international filling date or priority dates and not a femiliar with the spatiation of other in andrewals he principle or those of other in andrewals he principle or those of other in andrewals he principle or those of other in andrewals to principle or those of other in andrewals he principle or those of other in andrewals to principle or those of occurrence to classical prevailon are other recents. ***C additional of the international filling date or other means to considered to be of the decument in the conditional of the international filling date or other means and decument in principle or those or a parce of the street filling date or other means and principle or those or a parce of the street in the conditional of the international filling date or other means and principle or the other of the street filling date or other means and principle or the other of the street filling date or other means and principle or the other of the street filling date or other means and principle or the other of the street filling date or other means and				
US 2002/0139540 A1 (Lauritzen) 03 OCtober 2002 (03.10.2002), see paragraph 0038. A US 4,919,177 A (Claycomb) 10 April 1990 (10.04.1990), see Figures. LS 4,995,464 A (Walkins et al.) 26 February 1991 (26.02.1991), see Figures. LUS 3,667,547 A (Ahlstone) 06 June 1972 (06.06.1972), see Figures. LUS 3,667,547 A (Coone et al.) 22 October 1993 (22.10.1996), see Figures. LUS 5,566.772 A (Coone et al.) 18 October 1993 (18.10.1988), see Figures. LUS 4,778,088 A (Gonzalez et al.) 18 October 1988 (18.10.1988), see Figures. LUS 6,516.887 B2 (Nguyen et al.) 11 February 2003 (11.02.2003), see Figures. LUS 6,516.887 B2 (Nguyen et al.) 11 February 2003 (11.02.2003), see Figures. Further documents are listed in the continuation of Box C. See patent family annex. Liter document publishes after the lettershiold bet cheef to sander of particular relevance. """ document deflaing the general state of the ort which is not considered to be sold to be volve as hypothesis to examble considered to be well as hypothesis to examble a document of particular relevance discontinuation decision dissontinuation of particular relevance discontinuation of particular relevance discontinuation decision dissontinuation decision				
A US 4.915,177 A (Claycomb) 10 April 1990 (10.04.1990), see Figures. A US 4.995,464 A (Walkins et al.) 26 February 1991 (26.02.1991), see Figures. A US 3.667,547 A (Ahlstone) 06 June 1972 (06.06.1972), see Figures. A US 5.566.772 A (Coone et al.) 22 October 1993 (22.10.1996), see Figures. A US 4.778,088 A (Gonzalez et al.) 18 October 1988 (18.10.1988), see Figures. A. T US 6.516.887 B2 (Nguyen et al.) 11 February 2003 (11.02.20h3), see Figures.				
A US 4.915,177 A (Claycomb) 10 April 1990 (10.04.1990), see Figures. A US 4.995,464 A (Walkins et al.) 26 February 1991 (26.02.1991), see Figures. A US 3.667,547 A (Ahlstone) 06 June 1972 (06.06.1972), see Figures. A US 5.566.772 A (Coone et al.) 22 October 1993 (22.10.1996), see Figures. A US 4.778,088 A (Gonzalez et al.) 18 October 1988 (18.10.1988), see Figures. A. T US 6.516.887 B2 (Nguyen et al.) 11 February 2003 (11.02.20h3), see Figures.				
A US 4,995,464 A (Walkins et al.) 26 February 1991 (26.02,1991), see Figures. 1-20 A US 3,667,547 A (Ahistone) 06 June 1972 (06.06.1972), see Figures. 1-20 A US 5,566,772 A (Coone et al.) 22 October 1993 (22.10.1996), see Figures. 1-20 A US 4,778,088 A (Gonzalez et al.) 18 October 1988 (18.10.1988), see Figures. 1-20 A. T US 6,516,887 B2 (Nguyen et al.) 11 February 2003 (11.02.2003), see Figures. 1-20 Further document acfaling the general state of the or which is not considered to be of particular reference. -A- document defaling the general state of the or which is not considered to be of particular reference. -R- antic application or patent published on or after the international filling date or referring the action of the or after the international filling date or considered novel or considered to be one states aftern the considered to be one after the following the internation of considered to be one after the following the internation of considered to sevolve as inventive step when the document is decimated in the considered to sevolve as inventive step when the document is combined to the one of most other step when the document is combined to the one of most other step when the document is combined to the one of most other step when the document is combined to the one of most other step when the document is required to sevolve as a service defined in the art document patents of the actual complete on the international state that the principle of the international filing date but later than the principle of the international search report. A set of the actual completion of the international starch Date of the actual completion of the international starch				
A US 4,995,464 A (Walkins et al.) 26 February 1991 (26.02,1991), see Figures. 1-20 A US 3,667,547 A (Ahistone) 06 June 1972 (06.06.1972), see Figures. 1-20 A US 5,566,772 A (Coone et al.) 22 October 1993 (22.10.1996), see Figures. 1-20 A US 4,778,088 A (Gonzalez et al.) 18 October 1988 (18.10.1988), see Figures. 1-20 A. T US 6,516,887 B2 (Nguyen et al.) 11 February 2003 (11.02.2003), see Figures. 1-20 Further document acfaling the general state of the or which is not considered to be of particular reference. -A- document defaling the general state of the or which is not considered to be of particular reference. -R- antic application or patent published on or after the international filling date or referring the action of the or after the international filling date or considered novel or considered to be one states aftern the considered to be one after the following the internation of considered to be one after the following the internation of considered to sevolve as inventive step when the document is decimated in the considered to sevolve as inventive step when the document is combined to the one of most other step when the document is combined to the one of most other step when the document is combined to the one of most other step when the document is combined to the one of most other step when the document is required to sevolve as a service defined in the art document patents of the actual complete on the international state that the principle of the international filing date but later than the principle of the international search report. A set of the actual completion of the international starch Date of the actual completion of the international starch				
A US 3,667,547 A (Ahlstone) 06 June 1972 (06.06.1972), see Figures. 1-20 A US 5.566.772 A (Coone et al.) 22 October 1993 (22.10.1996), see Figures. 1-20 A US 4,778,088 A (Gonzalez et al.) 18 October 1988 (18.10,1988), see Figures. 1-20 A. T US 6,516,887 B2 (Nguyen et al.) 11 February 2003 (11.02.2063), see Figures. 1-20 Further documents are listed in the continuation of Box C. See patient family annex. 1-20 See patient family annex. 1-20 Further document defaing the general state of the on which is not considered to be of professive relevance. A document defaing the general state of the on which is not considered to be of professive relevance. A document defaing the general state of the on which is not considered to be of professive relevance. A document of particular relevance the claimed sevention special rection (as specifies) 1-2 document which stay throw dentes on priority claim(s) or which is cited to extend the patients relevance to particular relevance the claimed sevention specifies of the continuation of the international filing date but later than the published prior to the international filing date but later than the published prior to the international filing date but later than the published prior to the international filing date but later than the published prior to the international filing date but later than the published prior to the international filing date but later than the published prior to the international filing date but later than the published prior to the international filing date but later than the published prior to the international filing date but later than the published prior to the international filing date but later than the published of the actual completion of the international filing date but later than the published prior to the throw and published prior to the international filing date but later than the published prior to the throw and published prior to the international filing date but later than the published prior to the throw and published prior				
A US 3,667,547 A (Ahlstone) 06 June 1972 (06.06.1972), see Figures. 1-20 A US 5.566.772 A (Coone et al.) 22 October 1993 (22.10.1996), see Figures. 1-20 A US 4,778,088 A (Gonzalez et al.) 18 October 1988 (18.10,1988), see Figures. 1-20 A. T US 6,516,887 B2 (Nguyen et al.) 11 February 2003 (11.02.2063), see Figures. 1-20 Further documents are listed in the continuation of Box C. See patient family annex. 1-20 See patient family annex. 1-20 Further document defaing the general state of the on which is not considered to be of professive relevance. A document defaing the general state of the on which is not considered to be of professive relevance. A document defaing the general state of the on which is not considered to be of professive relevance. A document of particular relevance the claimed sevention special rection (as specifies) 1-2 document which stay throw dentes on priority claim(s) or which is cited to extend the patients relevance to particular relevance the claimed sevention specifies of the continuation of the international filing date but later than the published prior to the international filing date but later than the published prior to the international filing date but later than the published prior to the international filing date but later than the published prior to the international filing date but later than the published prior to the international filing date but later than the published prior to the international filing date but later than the published prior to the international filing date but later than the published prior to the international filing date but later than the published prior to the international filing date but later than the published of the actual completion of the international filing date but later than the published prior to the throw and published prior to the international filing date but later than the published prior to the throw and published prior to the international filing date but later than the published prior to the throw and published prior				
A US 5.566.772 A (Coone et al.) 22 October 1993 (22.10.1996), see Figures. A. T. US 6.516.887 B2 (Nguyen et al.) 18 October 1988 (18.10.1988), see Figures. I-20 I US 6.516.887 B2 (Nguyen et al.) 11 February 2003 (11.02.2003), see Figures. I I I I I I I I I I I I I I I I I I I				
A US 5.566.772 A (Coone et al.) 22 October 1993 (22.10.1996), see Figures. A. T. US 6.516.887 B2 (Nguyen et al.) 18 October 1988 (18.10.1988), see Figures. I-20 I US 6.516.887 B2 (Nguyen et al.) 11 February 2003 (11.02.2003), see Figures. I I I I I I I I I I I I I I I I I I I				
A. T US 6,516,887 B2 (Nguyen et al.) 18 October 1988 (18,10,1988), see Figures. 1-20 Further documents are listed in the continuation of Box C. Special enegaries of cited documents: A document defining the general state of the on which is not considered to be of particular relevance. Are earlier application or patent published on or after the international filing date of particular relevance. Accument which may throw doubts on privity claim(s) or which is cited to establish the publication date of seattler characteristics after the international filing date and the privilent relevance the claimed inventors and the publication of patent published are published after the international filing date of particular relevance the claimed inventors after the international filing date which are a provided to havelow as inventors and considered to havelow as inventors of particular relevance the claimed inventors are combined on the second to considered to havelow as inventors of particular relevance the claimed inventors are combined on the second to be combined on the second to considered to havelow as inventors of particular relevance the claimed in the articular after the particular relevance the claimed inventors are combined to be always as inventors of particular relevance the claimed in the articular after an arm of the claimed in the articular after an arm of particular relevance the claimed inventors are combined to be advisor to a particular relevance to particular relevance the claimed inventors are combined to be advisor to a particular relevance to particular relevance the combined of the same inventive step when the document is combined to be advisor to a particular relevance to particular relevance the combined of the same inventive and particular relevance to particular relevance the combined to be advisor to a particular relevance to particular relevance to particular relevance to particular relevance to				
A. T US 6,516,887 B2 (Nguyen et al.) 18 October 1988 (18,10,1988), see Figures. 1-20 Further documents are listed in the continuation of Box C. Special enegaries of cited documents: A document defining the general state of the on which is not considered to be of particular relevance. Are earlier application or patent published on or after the international filing date of particular relevance. Accument which may throw doubts on privity claim(s) or which is cited to establish the publication date of seattler characteristics after the international filing date and the privilent relevance the claimed inventors and the publication of patent published are published after the international filing date of particular relevance the claimed inventors after the international filing date which are a provided to havelow as inventors and considered to havelow as inventors of particular relevance the claimed inventors are combined on the second to considered to havelow as inventors of particular relevance the claimed inventors are combined on the second to be combined on the second to considered to havelow as inventors of particular relevance the claimed in the articular after the particular relevance the claimed inventors are combined to be always as inventors of particular relevance the claimed in the articular after an arm of the claimed in the articular after an arm of particular relevance the claimed inventors are combined to be advisor to a particular relevance to particular relevance the claimed inventors are combined to be advisor to a particular relevance to particular relevance the combined of the same inventive step when the document is combined to be advisor to a particular relevance to particular relevance the combined of the same inventive and particular relevance to particular relevance the combined to be advisor to a particular relevance to particular relevance to particular relevance to particular relevance to				
A. T US 6,516,887 B2 (Nguyen et al.) 11 February 2003 (11.02.2003), see Figures. Further documents are listed in the continuation of Box C. Special extegories of cited documents: A document defining the general state of the an which is not considered to be of particular relevance. A document defining the general state of the an which is not considered to anderstand the principlar chrony underlying the invention and its principlar relevance; the claimed invention does not according to the enterty in the considered nord of cannot be considered to involve as inventive and particular relevance; the claimed invention and particular relevance; the particular relevance; the claimed invention and particular relevance; the particular				
Further documents are listed in the continuation of Box C. Special exeguries of cited documents: A document defining the general state of the on which is not considered to be of particular relevance. A document defining the general state of the on which is not considered to be of particular relevance. A document of particular relevance the claimed inventors of the international filing and one of particular relevance; the claimed inventors in the inventors of particular relevance; the claimed inventors in the considered covered of cannot be considered to be when the document of particular relevance; the claimed inventors in the considered to involve as inventive step when the document is combined with one or store the considered inventors are inventive step when the document is combined with one or store the considered to involve as inventive step when the document is combined with one or store the document is combined with one or store the document is combined with one or store the document is combined to involve as inventive step when the document is combined with the spation of the international filing data but leave the store of the store patent fagily Date of mailing of the international search report				
Further documents are listed in the continuation of Box C. Special exeguries of cited documents: A document defining the general state of the on which is not considered to be of particular relevance. A document defining the general state of the on which is not considered to be of particular relevance. A document of particular relevance the claimed inventors of the international filing and one of particular relevance; the claimed inventors in the inventors of particular relevance; the claimed inventors in the considered covered of cannot be considered to be when the document of particular relevance; the claimed inventors in the considered to involve as inventive step when the document is combined with one or store the considered inventors are inventive step when the document is combined with one or store the considered to involve as inventive step when the document is combined with one or store the document is combined with one or store the document is combined with one or store the document is combined to involve as inventive step when the document is combined with the spation of the international filing data but leave the store of the store patent fagily Date of mailing of the international search report				
** Special entegrates of cited documents: **The special enterpolates of cited documents: **A** document defining the general state of the ort which is not considered to be of particular relevance. **A** and or application or places published on or after the international filing document of particular relevance; the classified by a special power of caused be considered to be obtained invention of particular relevance; the classified of the catalytic in catalytic in a special power of catalytic in catalytic in published on or after the international filing discussions of the combination of particular relevance; the classified of the combined power of particular relevance; the claimed invention expects to excellent to be obtained invention at the combined with one or more other such documents in particular relevance; the claimed invention expects to excellent to be obtained invention at particular relevance; the claimed invention expects to excellent to be obtained invention at the claimed invention of particular relevance; the claimed invention expects to excellent to be obtained in the combined with one or miner of particular relevance; the claimed invention expects to excellent to be obtained invention at the combined with one or miner of particular relevance; the claimed invention expects to excellent to be obtained invention at the combined with one or miner of particular relevance; the claimed invention expects to excellent to be obtained invention at the combined with one or miner of particular relevance; the claimed invention at the combined with one or miner of particular relevance; the claimed invention at the combined with one or miner of particular relevance; the claimed invention at the combined with one or miner of particular relevance; the claimed invention at the combined with one or miner of particular relevance; the claimed invention of the claimed invention of the considered to be obtained				
** Special entegrates of cited documents: **The special enterpolates of cited documents: **A** document defining the general state of the ort which is not considered to be of particular relevance. **A** and or application or places published on or after the international filing document of particular relevance; the classified by a special power of caused be considered to be obtained invention of particular relevance; the classified of the catalytic in catalytic in a special power of catalytic in catalytic in published on or after the international filing discussions of the combination of particular relevance; the classified of the combined power of particular relevance; the claimed invention expects to excellent to be obtained invention at the combined with one or more other such documents in particular relevance; the claimed invention expects to excellent to be obtained invention at particular relevance; the claimed invention expects to excellent to be obtained invention at the claimed invention of particular relevance; the claimed invention expects to excellent to be obtained in the combined with one or miner of particular relevance; the claimed invention expects to excellent to be obtained invention at the combined with one or miner of particular relevance; the claimed invention expects to excellent to be obtained invention at the combined with one or miner of particular relevance; the claimed invention expects to excellent to be obtained invention at the combined with one or miner of particular relevance; the claimed invention at the combined with one or miner of particular relevance; the claimed invention at the combined with one or miner of particular relevance; the claimed invention at the combined with one or miner of particular relevance; the claimed invention at the combined with one or miner of particular relevance; the claimed invention of the claimed invention of the considered to be obtained				
** Special entegrates of cited documents: **The special enterpolates of cited documents: **A** document defining the general state of the ort which is not considered to be of particular relevance. **A** and or application or places published on or after the international filing document of particular relevance; the classified by a special power of caused be considered to be obtained invention of particular relevance; the classified of the catalytic in catalytic in a special power of catalytic in catalytic in published on or after the international filing discussions of the combination of particular relevance; the classified of the combined power of particular relevance; the claimed invention expects to excellent to be obtained invention at the combined with one or more other such documents in particular relevance; the claimed invention expects to excellent to be obtained invention at particular relevance; the claimed invention expects to excellent to be obtained invention at the claimed invention of particular relevance; the claimed invention expects to excellent to be obtained in the combined with one or miner of particular relevance; the claimed invention expects to excellent to be obtained invention at the combined with one or miner of particular relevance; the claimed invention expects to excellent to be obtained invention at the combined with one or miner of particular relevance; the claimed invention expects to excellent to be obtained invention at the combined with one or miner of particular relevance; the claimed invention at the combined with one or miner of particular relevance; the claimed invention at the combined with one or miner of particular relevance; the claimed invention at the combined with one or miner of particular relevance; the claimed invention at the combined with one or miner of particular relevance; the claimed invention of the claimed invention of the considered to be obtained				
** Special entegrates of cited documents: **The special enterpolates of cited documents: **A** document defining the general state of the ort which is not considered to be of particular relevance. **A** and or application or places published on or after the international filing document of particular relevance; the classified by a special power of caused be considered to be obtained invention of particular relevance; the classified of the catalytic in catalytic in a special power of catalytic in catalytic in published on or after the international filing discussions of the combination of particular relevance; the classified of the combined power of particular relevance; the claimed invention expects to excellent to be obtained invention at the combined with one or more other such documents in particular relevance; the claimed invention expects to excellent to be obtained invention at particular relevance; the claimed invention expects to excellent to be obtained invention at the claimed invention of particular relevance; the claimed invention expects to excellent to be obtained in the combined with one or miner of particular relevance; the claimed invention expects to excellent to be obtained invention at the combined with one or miner of particular relevance; the claimed invention expects to excellent to be obtained invention at the combined with one or miner of particular relevance; the claimed invention expects to excellent to be obtained invention at the combined with one or miner of particular relevance; the claimed invention at the combined with one or miner of particular relevance; the claimed invention at the combined with one or miner of particular relevance; the claimed invention at the combined with one or miner of particular relevance; the claimed invention at the combined with one or miner of particular relevance; the claimed invention of the claimed invention of the considered to be obtained				
** Special entegrates of cited documents: **The special enterpolates of cited documents: **A** document defining the general state of the ort which is not considered to be of particular relevance. **A** and or application or places published on or after the international filing document of particular relevance; the classified by a special power of caused be considered to be obtained invention of particular relevance; the classified of the catalytic in catalytic in a special power of catalytic in catalytic in published on or after the international filing discussions of the combination of particular relevance; the classified of the combined power of particular relevance; the claimed invention expects to excellent to be obtained invention at the combined with one or more other such documents in particular relevance; the claimed invention expects to excellent to be obtained invention at particular relevance; the claimed invention expects to excellent to be obtained invention at the claimed invention of particular relevance; the claimed invention expects to excellent to be obtained in the combined with one or miner of particular relevance; the claimed invention expects to excellent to be obtained invention at the combined with one or miner of particular relevance; the claimed invention expects to excellent to be obtained invention at the combined with one or miner of particular relevance; the claimed invention expects to excellent to be obtained invention at the combined with one or miner of particular relevance; the claimed invention at the combined with one or miner of particular relevance; the claimed invention at the combined with one or miner of particular relevance; the claimed invention at the combined with one or miner of particular relevance; the claimed invention at the combined with one or miner of particular relevance; the claimed invention of the claimed invention of the considered to be obtained				
-A" document defining the general state of the ort which is not considered to be of particular relevance. -R" antier application or patent published on or after the international filing discussions which may throw doubts on priority claim(s) or which is cited to exacilate the publish the publishment described or other special reason (as a specified). -U" document which may throw doubts on priority claim(s) or which is cited to exacilate the publish the publishment described considered power of particular relevance; the claimed invention exacts be considered to involve as inventive step when the document is particular relevance; the claimed invention exacts be combined with one or more other such documents. Such combination being obvious to a particular relevance; the claimed invention are other special reason combination being obvious to a particular relevance; the claimed invention are other special reason combination being obvious to a particular relevance; the claimed invention are other special reason combination being obvious to a particular relevance; the claimed invention are other special reason combination being obvious to a particular relevance; the claimed invention are other special reason combination being obvious to a particular relevance; the documents is taken alone. -V" document of particular relevance; the claimed invention are other special reason. -V" document reference: -V" document of particular relevance; the claimed invention are other special reason. -V" document of particular relevance; the claimed invention are other special reason. -V" document of particular relevance; the claimed invention are other special reason. -V" document reference of particular relevance; the claimed invention are other special reason. -V" document of particular relevance; the claimed to involve as invention of particular relevance; the claimed to involve as invention of particular relevance; the claimed to involve as invention of particular relevance; the claimed to involve as invention of th				
**A document defining his general state of the or which is not considered to be of puricular relevance. **A surfact application or patent published on or after the international tiling document of particular relevance; the claimed invention of patent published on or after the international tiling and the considered nowed or caused be considered nowed or caused in the published with the published on or after the international field. **A sectional of particular relevances to the object as inventions and the considered now of caused in the patent of particular relevances to the object and the considered now of caused in the published in the section of the considered in the published in the section of the considered in the published prior to the international filing data but later than the combination being obvious on a parent family **A sectional of particular relevances to considered now of caused invention and patent international filing data but later than the combination being obvious on a parent family **A sectional of particular relevances to considered now of caused invention and particular relevances to the object of the section in the published in the caused in the particular relevances to the object of particular relevances to considered now of caused invention and particular relevances to the object of particular relevances to the object of the section and the particular relevances to the object of particular relevances to the object of the section and the particular relevances to the object of caused in the particular relevances to the object of caused invention and the particular relevances to the object of caused invention and the object of the object of caused invention and caused inven				
-R" earlier application or patent published on or after the international filling downward of particular relevances the claimed invention of patent published on or after the international filling downward or caused be considered nowed or caused to be obtained invention at the publication of caused in the published with the published on a context expected reason to establish the published on a context expected reason to establish the published prior in the factories, such the document of particular relevance; the claimed invention accounts to provide an invention and particular relevance; the claimed invention accounts to expect the document of particular relevance; the claimed invention account to examine the particular relevance; the claimed invention accounts to examine the claimed invention accounts to examine the combination being obvious to a particular relevance; the claimed invention accounts to examine the claimed invention accounts accounts the claimed to be considered to be co				
-R" sarder application or patent published on or after the international tiling that application or patent published on or after the international tiling at the same that decimals is taken after the considered to involve as inventive and provide a inventive and provide as a combined to the same other same the combined with one or manuscribe attention and the same and decimals invention or other means adocument referring as as and decimals, such accommand the filter and the combined with one or manuscribe attention and inventive and provide as a parson skilled in the and accommand print on the international filting date but later than the provider and accommand and the combination of the international search. Date of mailing of the international search report.				
**C* document which may throw doubts on priority claim(s) or which is cited to establish the publication does of acother clistics or other special reason combined with one or more other necessary is combined with one or more other necessary in the document referring on an oral disclosure, use, exhibition or other means document published prior to the international filing data but later than the priority day related. Date of the setual completion of the international search patent. Date of mailing of the international search report				
to estabilità the publication done of accider citation or other special reason (as aposition) "O" discommat referring to an oral disciount, use, exhibition or other means "o" document referring to an oral disciount, use, exhibition or other means "o" document published prior to the international filing data but later than the Date of the actual completion of the international search Date of mailing of the international search report				
to establish the publication does of another challen or other special reason (as aposition) -0" discusses referring at an oral disciousts, such exhibition of other means document published prior to the international filing data but later than the priority data rightered from of the international search Date of the settled completion of the international search Date of mailing of the international search report				
-0" document referring to an earl disclosure, use, exhibition of other means document published prior to the international filing data but later than the Date of the settland completion of the international search Date of mailing of the international search report				
"document referring to an end disclosure, use, enablished or other means "document published prior to the international filing data but later than the priority data related. Date of the settled completion of the international search Date of mailing of the international search O. A. B.O.D. DOCE				
Date of the actual completion of the international search Date of the actual completion of the international search Date of mailing of the international search Date of mailing of the international search Date of mailing of the international search				
Date of the actual completion of the international search Date of mailing of the international search report				
0.4 8407 0005				
04 August 2004 (04,08,2004)				
Name and mailing address of the ISA/US Authorized officer				
Mail Stop MCT Atta: (SAIUS				
Cummissioner for Patents David Bagnell				
P.O. Box 1450 Alexandria, Virginia 22313-1450 Telephone No. (703) 308-1113				
Facainalla No. (703) 305-3230				
Furn PCT/(SA/210 (second sheet) (July 1998)				

PCT/US04/08073

INTERNATIONAL SEARCH REPORT

ilegory *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No
A,E	US 6,732,806 B2 (Mauldin et al.) 11 May 2004 (11.05.2004), see Figures.	21-34
A,E	US 6.695,065 B2 (Simpson et al.) 24 February 2004 (24.02.2004), see Figures.	21-34
A,P.L	US 6,543,552 B1 (Metcalfe et al.) 08 April 2003 (08.04.2003), see Figures.	21-34
A.P.L	US 6,543,545 B1 (Chatterji et al.) 08 April 2003 (08.04.2003), see Figures.	21-34
A	US 6,325,148 B1 (Trahan et al.) 04 December 2001 (04.12.2001), see Figures.	21-34
A	US 5,785,120 A (Smalley et al.) 28 July 1998 (28.07.1998), see Figures.	21-34
	·	

Form PCT/ISA/210 (second sheet) (July 1998)

	PCT/US04/080=3
INTERNATIONAL SEARCH REPORT	
INTERNATIONAL SEARCH REPORT	
	1
	J
	1
	t to the second
	ļ
	l
	!
	•
Continuation of B. FIELDS SEARCHED Item 3:	
EAST	
EAS!	tion thread forms coment resistance restriction
scarch terms: expandable casing, expandable tubing, expandable liner, connec obstruction, expander, expansion cone, expansion mandrel, rotation, tension,	liner hanger
· 1	
i	
•	
•	
•	
;	
1	
}	
}	
\	
	•
t	
:	
4	

Form PCT/ISA/210 (second sheet) (July 1998)

This Page is Inserted by IFW Indexing and Scanning Operations and is not part of the Official Record

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images include but are not limited to the items checked:

☑ BLACK BORDERS
☐ IMAGE CUT OFF AT TOP, BOTTOM OR SIDES
☐ FADED TEXT OR DRAWING
☐ BLURRED OR ILLEGIBLE TEXT OR DRAWING
☐ SKEWED/SLANTED IMAGES
☐ COLOR OR BLACK AND WHITE PHOTOGRAPHS
☐ GRAY SCALE DOCUMENTS
☐ LINES OR MARKS ON ORIGINAL DOCUMENT
☐ REFERENCE(S) OR EXHIBIT(S) SUBMITTED ARE POOR QUALITY
□ OTHER:

IMAGES ARE BEST AVAILABLE COPY.

As rescanning these documents will not correct the image problems checked, please do not report these problems to the IFW Image Problem Mailbox.